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Div. of Forest Insect Research

Forest Insect Research

I would like to obtain a copy of your recent research note on the over-wintering habits of Ips lecontei and Ips confusus.

You may be interested in knowing that in the Pacific Northwest the late season populations of the Oregon pine ips, Ips oregonis (which Hopping has synonymized recently under I. pini), frequently become profoundly gregarious under bark in a manner similar to that you describe for I. lecontei and I. confusus. However, a gregarious tendency also sometimes occurs in the middle of the summer. This tendency is particularly evident in outbreak areas, with practically all ips-killed trees being attacked primarily by the profoundly gregarious populations (subpopulations ?, races ?). It is unusual in outbreak areas to remove the bark from ips-killed trees and find the "normal" inverted-"Y" parent galleries. The number of beetles involved in the very heavy attacks compares with the figures you show for overwintering I. confusus, that is, approximately 200 to 500 per square foot. "Normal" parent densities for I. oregonis are usually slightly less than 100 per square foot. As you would expect, the very heavy attacks result in little or no brood production, both because the attacking beetles destroy most of the cambium, and because the bark is very often stripped off infested trees by woodpeckers which prey heavily on the congregated beetles.

The very heavy attacks also occur in felled trees. Mostly, however, the attacks occur on the undersides of the downed trees. This may indicate something related to summer activation on the part of beetles that are involved in the very heavy attacks. I have determined that sex ratios in the profoundly gregarious populations, at least those on ponderosa pine thinning slash, range from about 1.2 to 1.5 females per male. These are unusual because attack sex ratios in I. oregonis usually range from about 2.5 - 2.9 females per male. The sex ratios of profoundly gregarious populations more closely approximate pre-emergent populations, and my original thought was that they were pre-emergent populations rather than attacking, but I know otherwise now.

At this time, I am unable to offer good reasons for the causes of the gregarious habit in summer I. oregonis populations, or why sex ratios are unusually low for attacking populations. I am interested in knowing whether you have observed the gregarious habit in summer populations of I. lecontei and I. confusus. And, if so, do you have any clues as to why it occurs?

I should also like to know the extent of your interest in ips beetles and whether you have additional studies planned.

Enclosure
cc: N. D. Wygant

P.S. A copy of a progress report on my field work is enclosed for your files. Please pass it along to Dr. Stelzer for his information.

CSartwell:hs

bc: C. Sartwell